

# IN THE SPECIFICATION

Please amend the Specification as follows:

Page 5, line 26 - Page 6, line 22, rewrite this paragraph as follows:

SO<sub>2</sub> is the ratio of the oxyhaemoglobin concentration [HbO<sub>2</sub>] to the total concentration of haemoglobin ([HbO<sub>2</sub>] + [Hb], where [Hb] is haemoglobin concentration) express as a percentage.

$$SO_2 = \frac{[HbO_2] \times 100}{[HbO_2] + [Hb]}$$

SaO<sub>2</sub> is arterial oxygen saturation.

The reflected absorptions (A) at six wavelengths (500, 528, 550, 560, 572 and 586 nm) are used to calculate two parameters, HbI and OXI:

~~$$HbI = (A_{528} - A_{500}) + (A_{550} - A_{528}) + (A_{572} - A_{550}) - (A_{586} - A_{572})$$~~

$$HbI = |A_{528} - A_{500}|/28 + |A_{550} - A_{528}|/22 + |A_{572} - A_{550}|/22 + |A_{586} - A_{572}|/14$$

~~$$OXI = ((A_{550} - A_{500}) + (A_{572} - A_{500})) / HbI$$~~

$$OXI = (|A_{560} - A_{550}|/10 + |A_{572} - A_{560}|/12) / HbI$$

SO<sub>2</sub> is calculated from the formula:

~~$$SO_2 = 100 \times (OXI - OXI_0) / (OXI_{100} - OXI_0)$$~~

$$SO_2 = 100 \times (OXI - OXI_0) / (OXI_{100} - OXI_0)$$

Where  $OXI_0$  and  $OXI_{100}$  are empirically determined values for OXI at  $SO_2$  values of 0% and 100% in skin. HbI is the haemoglobin index, such that:

$$HbI \times k = [Hb]$$

where  $k$  is a constant.